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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Bernard A. Traversat, et al

Serial No. 10/055,641

Filed: January 22, 2002

For: RENDEZVOUS FOR
LOCATING PEER-TO-PEER
RESOURCES

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Group Art Unit: 2143

Examiner: Nguyen, Phuoc H.

Atty. Dkt. No.: 5681-07200

**CERTIFICATE OF MAILING
37 C.F.R. § 1.8**

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Date

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal filed May 10, 2006 and the Notice of Panel Decision mailed June 22, 2006, Appellants present this Appeal Brief. **This Appeal Brief is timely submitted within one month of the mailing date of the Notice of Panel Decision. Thus, no extension of time should be required.** Appellants respectfully request that the Board of Patent Appeals and Interferences consider this appeal.

I. REAL PARTY IN INTEREST

As evidenced by the assignment recorded at Reel/Frame 012545/0541, the subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and now having its principal place of business at 4150 Network Circle, Santa Clara, CA 95054.

II. RELATED APPEALS AND INTERFERENCES

No other appeals, interferences or judicial proceedings are known which would be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-47, 86-146 and 160-193 are allowed. Claims 48-85, 147-159 and 194-203 stand finally rejected. The rejection of claims 48-85, 147-159 and 194-203 is being appealed. A copy of claims 48-85, 147-159 and 194-203 is included in the Claims Appendix herein below.

IV. STATUS OF AMENDMENTS

Subsequent to the final rejection, an amendment was filed on April 10, 2006, in which claims 17, 45-47, 160 and 194 was amended. According to the Advisory Action of May 15, 2006, the amendments were entered by the Examiner. The Claims Appendix herein below reflects the entered amendments. No other amendments to the claims have been submitted subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 48 is directed to a rendezvous node that may help peer nodes locate network resources. *See, e.g.*, Abstract. The rendezvous node includes a processor, a port operable to couple the peer node to a network, and a memory. The memory is operable to store program instructions to implement communicating with one or more peer nodes on a peer-to-peer network. *See, e.g.*, paragraph [0026]. The memory is also operable to store program instructions to cache resource advertisements for network resources. *See, e.g.*, FIGs. 31 and 33 and paragraph [0026]. Each resource advertisement includes an indication of how to access the corresponding network resource. *See, e.g.*, paragraph [0026]. Each resource advertisement is discoverable by the peer nodes. For example, in one embodiment, a peer node may broadcast a discovery query message. The discovery query message may be formatted in accordance with a peer-to-peer platform discovery protocol and may include criteria specifying a particular type of network resource in which the peer node is interested. When the discovery query message reaches a rendezvous node that has advertisements for resources that satisfy the criteria in the discovery query message in its cache, the rendezvous node may respond by sending a response message to the peer node that may includes the resource advertisements. *See, e.g.*, FIGs. 33, 35, and 36 and paragraph [0298].

Independent claim 147 is directed to a method of locating network resources using a rendezvous node, similar to the rendezvous node of independent claim 48. *See, e.g.*, Abstract. The method includes a rendezvous node communicating with one or more peer nodes on a peer-to-peer network, *See, e.g.*, paragraph [0026]. The method also includes the rendezvous node caching resource advertisements for network resources. *See, e.g.*, FIGs. 31 and 33 and paragraph [0026]. Each resource advertisement includes an indication of how to access the corresponding network resource. *See, e.g.*, paragraph [0026]. The method also includes one or more peer nodes discovering the resource advertisements. Please see FIGs. 33, 35, and 36, paragraph [0298] and refer to the discussion of claim 48 above for an example of the method for discovering resources advertisements.

Independent claim 194 is directed to a tangible, computer-accessible storage medium including program instructions. *See, e.g.*, paragraph [0496]. The program instructions are computer-executable to implement locating network resources using a rendezvous node, similar to the rendezvous node of independent claim 48 and the method of claim 147. *See, e.g.*, Abstract. The program instructions implement a rendezvous node communicating with one or more peer nodes on a peer-to-peer network. *See, e.g.*, paragraph [0026]. The program instructions also implement a rendezvous node caching one or more resource advertisements for network resources. *See, e.g.*, FIGs. 31 and 33 and paragraph [0026]. Each resource advertisement includes an indication of how to access the corresponding network resource. *See, e.g.*, paragraph [0026]. The program instructions also implement one or more peer nodes discovering the resource advertisements. Please see FIGs. 33, 35, and 36, paragraph [0298] and refer to the discussion of claim 48 above for an example of the method for discovering resources advertisements.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 48-82, 147-157, and 194-203 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Dutta et al. (U.S. Publication 2002/0073075) (hereinafter “Dutta”) in view of Borella et al. (U.S. Patent 6,269,099) (hereinafter “Borella”).

2. Claims 83-85, 158, and 159 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Dutta and Borella, and in further view of Dutta et al. (U.S. Publication 2002/0073204) (hereinafter “Dutta ‘204”).

VII. ARGUMENT

Claims 48, 49, 50, 53, 64, 65, 70 and 76:

The Examiner rejected independent claim 48 under the same rationale as claim 1. However, the Examiner has withdrawn the rejection of claim 1. Moreover, the scope of claim 48 differs from that of claim 1. Since the Examiner has withdrawn the rejection of claim 1 and has failed to address the differences between claim 1 and claim 48, the Examiner has failed to state a *prima facie* rejection of claim 48.

Further in regard to claim 48, Dutta in view of Borella fails to teach or suggest *a rendezvous node, comprising a processor, a port operable to couple the peer node to a network, and a memory operable to store program instructions, wherein the program instructions are executable by the processor to communicate with one or more peer nodes on a peer-to-peer network and cache one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource, wherein said resource advertisements are discoverable by said one or more peer nodes.* Appellants argued in the Response to Final Action mailed April 10, 2006 (regarding claim 1), that Dutta in view of Borella fails to teach or suggest one or more rendezvous nodes, wherein each rendezvous node is operable to cache one or more resource advertisements for discovery by the peer nodes on the peer-to-peer network. In the Final Action, the Examiner cited Dutta (page 4, paragraph [0045]; page 6, paragraph [0076]; and page 7, paragraph [0082]) as teaching this limitation. The first of these paragraphs describes a Globally Unique Identifier (GUID), contained in each message. When a node receives a search query, its GUID is compared with a stored list of GUIDs corresponding to search queries previously received by the node. Appellants assume the Examiner meant to equate these GUIDs with the resource advertisements of the present invention. However, GUIDs are not resource advertisements. Instead, they are identifiers of query messages. Furthermore, there is nothing in Dutta that describes these GUIDs being cached by a rendezvous node. Nor does this portion of Dutta describe that GUIDs are discoverable

by peer nodes on a peer-to-peer network. The Examiner's second and third citations referred to a registered root node, which Appellants assume the Examiner meant to equate with the rendezvous node of the present invention. However, this registered root node is not described as operable to cache resource advertisements that are discoverable by peer nodes on the peer-to-peer network, as in claim 48. Instead, Dutta's "root nodes" are described as: "the set of nodes to which a particular node connects" (paragraph [0041]) and a "registered root node" is described as a node which a user has registered as a "root node", e.g., to join a service operator's peer-to-peer network (paragraph [0053]).

Furthermore, Dutta's GUIDs are not described as comprising *an indication of how to access a corresponding network resource*, as recited in claim 48 regarding resource advertisements. The Examiner cites Dutta (page 5, paragraph [0062]) as teaching this limitation. However, this citation does not describe GUIDs or resource advertisements, but instead describes search hits comprising hyperlinks containing the title of a web page or other file or document matching a search query. These search links are also not described as being cached by a rendezvous node, nor is there anything else in Dutta or Borella, or the combination thereof, that teaches or suggests this limitation of claim 48.

In the Final Action the Examiner submitted that Figure 4 clearly discloses the one or more rendezvous nodes, wherein each rendezvous node is operable to cache one or more resource advertisements for discovery by the peer nodes on the peer-to-peer network. The Examiner submitted that the registered root nodes which the server knows ahead of operation (in Dutta) are analogous to the rendezvous nodes of Appellants' claim 1 (and, presumably, the rendezvous node of claim 48). The Examiner further submitted that each root node caches one or more resource advertisements as the GUID (paragraph [0045]). The Examiner is clearly incorrect. Dutta's GUID (Globally Unique Identifier) is clearly not a resource advertisement. Instead, it is an identifier of a query message. Paragraph [0045] describes that this GUID is stored by receiving nodes so that if a duplicate query is received, the nodes may safely drop the packet containing the request. Therefore, this citation, and Dutta's GUIDs, clearly have nothing to do with a rendezvous node caching one or more resource advertisements, as recited in Appellants' claim 48.

In the Advisory Action mailed on May 15, 2006, the Examiner's grounds for rejecting claim 48 are very different from his original grounds for rejecting claim 1. In the Advisory Action, the Examiner submits that Dutta (in paragraph [0039]) discloses resource advertisements, that are cached on a rendezvous node, and that are discoverable by peer nodes. The Examiner is incorrect. First, the Examiner submits that Dutta's root node is analogous to Appellants' rendezvous node. However, paragraph [0039] does not describe the root node of Dutta, but instead describes typical software components of a prior art peer-to-peer network (see, e.g., Dutta, FIG. 2C and paragraph [0036].) In addition, the Examiner's citation describes that a user may specify a list of files that may be exported or shared. This list is stored on the node itself and may be searched by a server component of the node itself when a query is received. While one of the files may be exported and shared in response to a search hit, there is nothing in Dutta to teach that the list of files that the user is willing to export or share is itself exported or shared, or that it is cached on or may be searched by a root node, as the Examiner implies. This list of files is clearly not a resource advertisement, cached on a root node, and it is also clearly not discoverable by peer nodes on a peer-to-peer network, as the Examiner contends.

Also in the Advisory Action, the Examiner submits that Dutta teaches (in paragraph [0046]) resource advertisements comprising an indication of how to access the corresponding network resource. Again, the Examiner is incorrect. First, the Examiner's citation does not describe a resource advertisement cached on Dutta's root node (which the Examiner equates with Appellants' rendezvous node.) Instead, this citation describes the prior art file searching/sharing program, Gnutella (see, e.g., Dutta, paragraph [0042].) Paragraph [0046] does not describe the contents of a resource advertisement cached on a rendezvous node and discoverable by peer nodes, but instead describes the contents of a query hit (query reply) message according to the Gnutella protocol.

To establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180

U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Appellants assert that, as discussed above, the cited art does not teach or suggest all limitations of the currently pending claims. Therefore, the Examiner has clearly failed to establish a *prima facie* case of obviousness.

For at least the reasons above, the rejection of claim 48 is not supported by the cited art and removal thereof is respectfully requested.

Claim 51:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein each resource advertisement comprises an identifier for and communication address for the corresponding network resource*. The Examiner submits that paragraph [0046] of Dutta teaches that a resource advertisement includes the name of the file and a communication address for a corresponding network resource. However, as discussed above, this citation does not describe a resource advertisement such as that recited in Appellants' claims at all, much less one containing an identifier for and communication address for the corresponding network resource. Instead, it describes a query hit (query reply) message of the Gnutella protocol.

For at least the reasons above, the rejection of claim 51 is not supported by the cited art and removal thereof is respectfully requested.

Claim 52:

Similarly, and contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein each of the one or more of said resource advertisements comprises a security credential for authenticating the corresponding network resource*. The Examiner cites paragraphs [0053] and [0055] of Dutta as teaching this limitation. However, these paragraphs have nothing to do with a

resource advertisement, as recited in Appellants' claims. Instead, they describe information that may be required for a node during when registering the node as a root node, such as personal information about a user associated with the node. Furthermore, they describe nothing about this information being used as a security credential for authenticating a corresponding network resource, as in Appellants' claimed invention.

For at least the reasons above, the rejection of claim 52 is not supported by the cited art and removal thereof is respectfully requested.

Claim 54:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more peer groups, wherein each peer group comprises one or more peer nodes, wherein the resource advertisements include a peer group advertisement for each of said one or more peer groups, wherein each peer group advertisement further comprises an identifier for the corresponding peer group and information on how to join the peer group.* The Examiner submits that Dutta discloses in Figure 4 that peer group R1 420 contains peer nodes P1-P4 and that paragraphs [0081], [0082], and [0086] teach a resources advertisement including the peer group advertisement recited in claim 54. The first two paragraphs describe that nodes may be discovered at search time by determining the topology/interconnections of the peer-to-peer network, and that, "The manner in which other nodes can be invited to join the search engine's connection host list can vary depending upon the implementation." First, Appellants submit that a mere list of nodes to which a particular node is connected does not constitute a peer group, as would be understood by one of ordinary skill in the art. Paragraph [0086] goes on to describe a flow chart for compensating (i.e., paying) an entity that provides information for a successful search-engine-based, peer-to-peer search. Appellants submit that none of these citations has anything to do with a resource advertisement or a peer group advertisement, much less any resource advertisement including a peer group identifier and information on how to join the peer group, as recited in claim 54.

For at least the reasons above, the rejection of claim 54 is not supported by the cited art and removal thereof is respectfully requested.

Claim 55:

Contrary to the Examiner's citation, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more peer nodes, wherein the resource advertisements comprise a peer advertisement for each of said one or more peer nodes, wherein each peer advertisement comprises an identifier for the corresponding peer node.* The Examiner submits that Dutta, in paragraph [0046], teaches this limitation by describing that each peer node provides the share file list with other peers and provides an identifier such as the address and port number corresponding to peer nodes. The Examiner is incorrect. First, as discussed above, paragraph [0046] does not describe Appellants' resource advertisement at all. Instead, it describes a query hit (query reply) message. In addition, there is nothing in this citation, or elsewhere in Dutta, that describes providing the share list to other peers, as the Examiner contends. Finally, there is nothing in Dutta that teaches or suggests that such a share list exists for each of the one or more peer nodes communicating with the rendezvous node, as recited in Appellants' claims. Instead, paragraph [0039] of Dutta describes that searching a list of files a user is willing to share is only one of several alternatives available for the nodes of Dutta's system and method.

For at least the reasons above, the rejection of claim 55 is not supported by the cited art and removal thereof is respectfully requested.

Claim 56:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more services each provided by one or more peer nodes, wherein the*

resource advertisements comprise a service advertisement for each of said plurality of services, wherein each service advertisement comprises an identifier for the corresponding service. The Examiner submits that Dutta teaches these limitations in paragraphs [0039] and [0046] by describing each peer node “providing service such as file sharing to other peer nodes” and by providing the address of the peer node providing the service. Appellants submit, however, nothing in Dutta teaches or suggests resource advertisements comprising a service advertisement for each service (i.e., an advertisement for a file sharing service, in the Examiner’s example). In addition, nothing in Dutta teaches or suggests such a service advertisement comprising an identifier of a service. Instead, the Examiner’s example refers to an identifier of a node providing a file.

For at least the reasons above, the rejection of claim 56 is not supported by the cited art and removal thereof is respectfully requested.

Claim 57:

Contrary to the Examiner’s assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include a plurality of applications each provided by one or more peer nodes, wherein the resource advertisements comprise an application advertisement for each of said applications, wherein each application advertisement comprises an identifier for the corresponding application.* In the Final Action, the Examiner submitted that Dutta taught this limitation (along with claim 9) in paragraph [0084]. Appellant argued in the Response to Final Action, and again assert, that paragraph [0084] does not have anything to do with resource advertisements comprising application advertisements, but describes a generic process for performing a search by sending query messages to registered nodes and parsing the responses.

In the Advisory Action, the Examiner states different grounds for rejecting claim 57. In the Advisory Action, the Examiner submits that these limitations are taught in Dutta, paragraph [0046]. However, there is nothing in this citation or elsewhere in Dutta

that describes anything about an application advertisement, much less one having the specific limitations of Appellants' claims. In addition, the Examiner failed to point out anything in his remarks regarding this limitation. Instead, his remarks are directed toward the limitations of claim 55.

For at least the reasons above, the rejection of claim 57 is not supported by the cited art and removal thereof is respectfully requested.

Claim 58:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more contents each provided by one or more peer nodes, wherein the resource advertisements comprise a content advertisement for each of said contents, wherein each content advertisement comprises an identifier for the corresponding content*. In the Final Action, the Examiner submitted that Dutta taught this limitation (along with claim 10) in paragraph [0084]. Appellants argued in the Response to Final Action, and again assert, that paragraph [0084] does not have anything to do with resource advertisements comprising content advertisements, but describes a generic process for performing a search by sending query messages to registered nodes and parsing the responses.

In the Advisory Action, the Examiner states different grounds for rejecting claim 58. In the Advisory Action, the Examiner submits that these limitations are taught in Dutta, paragraph [0046]. However, there is nothing in this citation or elsewhere in Dutta that describes anything about a content advertisement, much less one having the specific limitations of Appellants' claims. **In addition, the Examiner failed to address this limitation in his remarks.** Instead, his remarks are directed toward the limitations of claim 55.

For at least the reasons above, the rejection of claim 58 is not supported by the cited art and removal thereof is respectfully requested.

Claim 59:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more pipes, wherein the one or more pipes are communications channels between peer nodes, services and applications, wherein the resource advertisements comprise a pipe advertisement for each of said one or more pipes, wherein each pipe advertisement comprises an identifier for the corresponding pipe.* In the Final Action, the Examiner cited paragraph [0054] as teaching these limitations. This paragraph describes that, "The user must supply technical information so that the server can establish a peer-to-peer connection with the user's computer or a similar device." However, there is nothing in this citation or elsewhere in Dutta that describes the pipes of claim 59, or that describes the "technical information" being comprised in a pipe advertisement contained in a resource advertisement, as recited in Appellants' claims.

For at least the reasons above, the rejection of claim 59 is not supported by the cited art and removal thereof is respectfully requested.

Claim 60:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more pipe endpoints, wherein the pipe endpoints are network interfaces on peer nodes that are configured to be bound to pipes to establish the communications channels, wherein the resource advertisements comprise an endpoint advertisement for each of said one or more pipe endpoints, wherein each endpoint advertisement comprises an identifier for the corresponding pipe endpoint.* In the Final Action, the Examiner again cited Dutta, paragraph [0054], as teaching these limitations. However, as discussed

above regarding claim 59, there is nothing in this citation or elsewhere in Dutta that describes the pipes or pipe advertisements of Appellants' claims. Similarly, there is also nothing in this citation or elsewhere in Dutta that teaches or suggests pipe endpoints, endpoint advertisements, or resource advertisements containing these endpoint advertisements.

For at least the reasons above, the rejection of claim 60 is not supported by the cited art and removal thereof is respectfully requested.

Claim 61:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the network resources include one or more other rendezvous nodes on the peer-to-peer network, wherein the resource advertisements comprise an advertisement for each of said rendezvous nodes, wherein each advertisement comprises an identifier for the corresponding rendezvous node*. In the Final Action, the Examiner submits that these limitations are taught by FIG. 4 of Dutta. Appellants note that the Examiner does not include any remarks regarding which, if any, elements of FIG. 4 teach the above limitations or how, nor does he cite any description of FIG. 4 that teaches them. Furthermore, Appellants assert that nothing in FIG. 4, which depicts a search engine, or elsewhere in Dutta, teaches or suggests resource advertisements comprising an advertisement for each of one or more other rendezvous nodes, much less an advertisement for each rendezvous node having the specific limitations recited in claim 61.

For at least the reasons above, the rejection of claim 61 is not supported by the cited art and removal thereof is respectfully requested.

Claim 62:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are further executable to: generate an advertisement for the rendezvous node; and communicate said advertisement to peer nodes and other rendezvous nodes on the peer-to-peer network.* In the Final Action, the Examiner again cites FIG. 4 of Dutta as teaching these limitations. Appellants note that the Examiner does not include any remarks regarding which, if any, elements of FIG. 4 teach the above limitations or how, nor does he cite any description of FIG. 4 that teaches them. Furthermore, as discussed above regarding claim 62, FIG. 4, which depicts a search engine, has nothing to do with resource advertisements for rendezvous nodes, much less with generating such an advertisement for each rendezvous node, as recited in claim 62.

For at least the reasons above, the rejection of claim 62 is not supported by the cited art and removal thereof is respectfully requested.

Claim 63:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the one or more resource advertisements each comprise a time-to-live indicator, wherein the program instructions are further executable to: decrement the time-to-live indicator comprised by each of the one or more resource advertisement cached by the rendezvous node; and if the time-to-live indicator expires, delete or invalidate the particular cached resource advertisement.* In the Final Action, the Examiner cites Dutta, paragraph [0045] as teaching these limitations. However, as discussed in Appellants' response, this paragraph describes Dutta's GUIDs, and has nothing to do with either resource advertisements of a time-to-live indicator. The only time-to-live indicator in Dutta is one included in a query message for a content search (see, e.g., paragraph [0044]).

In the Advisory Action, the Examiner submits that Dutta teaches “each peer node capable of sharing resource advertisement by providing a file list to the root node which provide other peer node an indication that the shared peer node is available (e.g., a time-to-live indicator) for sharing it resource to other peers node.” Appellants assert that this statement by the Examiner has no basis in the cited reference. First, as previously noted, there is nothing in Dutta that teaches any node providing a file list to another node, as the Examiner contends. In addition, there is nothing in Dutta that describes a file list including any “indication that the shared peer node is available,” or a time-to-live indicator. Furthermore, the Examiner has not cited anything that teaches or suggests decrementing a time-to-live indicator of a resource advertisement or deleting or invalidating a resource advertisement in response to a time-to-live indicator expiring, as recited in claim 63, nor does Dutta teach these additional limitations.

For at least the reasons above, the rejection of claim 63 is not supported by the cited art and removal thereof is respectfully requested.

Claim 66:

Contrary to the Examiner’s assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are further executable to discover routes to network resources and communicate said routes to one or more peer nodes on the peer-to-peer network*. The Examiner submits that Dutta teaches these limitations in paragraph [0081]. However, this paragraph does not describe discovering routes to network resources and communicating them to peer nodes. Instead it describes that a search engine may, at search time, discover nodes by determining the topology/interconnections of the peer-to-peer network and these nodes may be invited to join the network of the search engine operator. There is nothing in this citation or elsewhere in Dutta that teaches or suggests discovering and communicating routes to network resources to one or more peer nodes.

For at least the reasons above, the rejection of claim 66 is not supported by the cited art and removal thereof is respectfully requested.

Claim 67:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are further executable to communicate with each of one or more peer nodes on the peer-to-peer network at startup of the particular peer node to aid the particular peer node in discovering network resources that the particular peer node requires.* The Examiner submits that, "... it is well know in the art that once you are connected to the Internet you can launch the utility and you are then logged into a central indexing server.... [that] indexes all users who are currently online connected to the server. The peer-to-peer client will contain an area where you can search for a specific file, when match is found the central server will tell you where to find the requested file. You can then choose a result from the search query and your utility when then attempt to establish a connection with the computer hosting the file you have requested (see paragraph [0052]), hence Dutta teaches a central server where the client peer node performed search request for resources available from other client peer nodes." Appellants assert that the Examiner's remarks are completely unsupported in the referenced art and that paragraph [0052] contains nothing teaching anything about communicating with peer nodes on the peer-to-peer network at startup time to aid the node in discovering network resources. Instead, paragraph [0052] describes a server-based distributed search process that takes place at search time, not at startup. Furthermore, as noted in Appellants Response to Final Action regarding claims 18, 67, 118, and 169, paragraph [0037] of Dutta **teaches away from** the limitations of claim 67 by describing that a peer-to-peer network is initiated when a user at a node manually enters a domain name or IP address of an application on another node that is known to support peer-to-peer networking and then the peer-to-peer application establishes a connection to the node. In other words, Dutta teaches that a peer node needing resources manually initiates a connection to a node known to include a particular application.

For at least the reasons above, the rejection of claim 67 is not supported by the cited art and removal thereof is respectfully requested.

Claim 68:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are further operable to: receive one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol; determine if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and if the resource advertisement satisfying the particular discovery query is cached on the particular rendezvous node, provide the resource advertisement to a peer node that broadcast the particular discovery query.* The Examiner cites Dutta, paragraphs [0051], [0052], [0046], [0059], and [0062], and FIG. 4 as teaching these limitations. However, as previously noted, Dutta does not teach resource advertisements cached on a rendezvous node at all, nor do they describe determining if they satisfy a discovery query, or a peer node broadcasting a discovery query. Instead, these citations describe a search engine and method that uses indexed searching and a server-based, distributed search process and different types of search hits or query replies (such as in the Gnutella protocol) that may be received. These search hits or query replies are clearly not resource advertisements cached on a rendezvous node, nor are they returned to a peer node that broadcast the discovery query, as recited in Appellants' claim 68.

In the Final Action, the Examiner admits that Dutta fails to teach or suggest the discovery queries are formatted in accordance with the discovery protocol and relies on Borella, column 2, lines 49-57 to teach this limitation. However, as discussed above, since Dutta's method does not rely on comparing discovery queries to resource advertisements, applying a discovery protocol format to Dutta's method would still not result in the present invention, in which one or discovery queries are formatted in

accordance with the peer-to-peer platform discovery protocol and if it is determined that a cached resource advertisement satisfies the discovery query, providing the advertisement to a peer node that broadcast the discovery protocol. Furthermore, the Examiner cites nothing in the cited art suggesting that applying the teachings of Borella to Dutta's system would result in enhanced performance, reliability or security of data transmitted over the Internet, as the Examiner contends.

For at least the reasons above, the rejection of claim 68 is not supported by the cited art and removal thereof is respectfully requested.

Claim 69:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 68, wherein the program instructions are further executable to forward each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node.* The Examiner cites paragraphs [0057] and [0058] as teaching these limitations. However, as discussed above regarding claim 68, Dutta does not teach or suggest resource advertisements cached on a rendezvous node, nor determining if they satisfy a discovery query. Furthermore, the Examiner's citations refer to a search engine culling the list of root nodes to which a search query may be sent in order not to overwhelm the ability of the server to handle responses from a large number of nodes, not to a rendezvous node forwarding a discovery query to another rendezvous node if a resource advertisement satisfying the query is not cached on the rendezvous node. There is nothing in Dutta that teaches these limitations, since cached resource advertisements are not taught by Dutta at all.

For at least the reasons above, the rejection of claim 69 is not supported by the cited art and removal thereof is respectfully requested.

Claim 71:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 68, wherein the discovery queries each comprise a security credential, wherein the program instructions are further executable to use the security credential to authenticate a peer node sending the particular discovery query*. The Examiner again cites Dutta, paragraphs [0052] – [0055] as teaching that the registered root node has to “provide the personal information.” However, as discussed above regarding claim 52, these paragraphs describe information that may be required for a node during when registering the node as a root node, such as personal information about a user associated with the node. They describe nothing about this information being a security credential comprised in a discovery query, nor about using this information for authenticating a peer node sending a discovery query, as in Appellants' claimed invention.

For at least the reasons above, the rejection of claim 71 is not supported by the cited art and removal thereof is respectfully requested.

Claim 72:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 68, wherein one or more of the discovery queries specify resource advertisements for network resources within a particular region of the network*. The Examiner submits that Dutta teaches this limitation in paragraphs [0057] and [0058]. However, as discussed above, these paragraphs describe a search engine culling the list of root nodes to which a search query may be sent in order not to overwhelm the ability of the server to handle responses from a large number of nodes. There is nothing in these citations, or elsewhere in Dutta, that teaches or suggests such culling is dependent on whether network resources are within a particular region of the network, as recited in claim 72. Furthermore, there is nothing in this citation, or elsewhere, that teaches or suggests a discovery query specifying resource advertisements

for resources within a particular region. Instead, Dutta describes culling the list of nodes to which a search query is sent.

For at least the reasons above, the rejection of claim 72 is not supported by the cited art and removal thereof is respectfully requested.

Claims 73-75, 77:

The Examiner submits (in arguments directed toward claims 33-35, 39, 73-75, 77, 134-136, 138, 155, 184-186, 188, and 202) that Dutta teaches, in paragraph [0051], each of the one or more rendezvous nodes are operable to: receive a discovery query message from one of the plurality of peer nodes specifying a desired type of advertisement, locate one or more advertisements of the desired type of advertisements that are cached on the rendezvous node; and send a response message comprising the one or more advertisements to the peer node in response to said discovery query message. Appellants assert, however that paragraph [0051] describes a search engine using an index search facility to through a Web index database on a server. This Web index database has nothing to do with advertisements of different types cached on a rendezvous node, nor with receiving a query for, or locating, one or more advertisements of a desired type in response to a query message specifying the desired advertisement type.

The Examiner admits that Dutta fails to teach the discovery query message is formatted in accordance with a peer-to-peer platform discovery protocol, and relies on Borella to teach this limitation in column 2, lines 49-57). However, as discussed above, since Dutta's method does not rely on comparing discovery queries to advertisements, applying a discovery protocol format to Dutta's method would still not result in the present invention, in which one or discovery queries formatted in accordance with the peer-to-peer platform discovery protocol are received by a rendezvous node, locating a cached advertisement that satisfies the discovery query, and sending a response message comprising the advertisement to the peer node that sent the discovery protocol.

The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Borella's teaching into Dutta's method to use the discover protocol to identify one another in the peer-to-peer platform in order to enhance performance, reliability and security of data transmitted over the Internet to and from Autonomous Systems or other networks. However, the Examiner has not cited anything in the references to suggest that the use of a discovery protocol would provide these benefits, nor that the system of Dutta would benefit in this way were a discovery protocol be incorporated into it. Furthermore, even if a discovery protocol were added to Dutta's system, the result would not teach or suggest all the limitations of these claims, as discussed above.

Appellants note that the Examiner failed to address the additional limitation of claim 73, *wherein the response message is formatted in accordance with the peer-to-peer platform discovery protocol*, nor did he address any of the additional limitations of claims 74, 75, and 77 in his remarks when rejecting these claims. Appellants assert that Dutta in view of Borella fails to teach or suggests these additional limitations as well, for reasons similar to those stated regarding claim 73.

For at least the reasons above, the rejection of claims 73-75, and 77 is not supported by the cited art and removal thereof is respectfully requested.

Claim 78:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 77, wherein the program instructions are further executable to cache for discovery by the plurality of peer nodes the advertisements received in the response message*. The Examiner cited Dutta, paragraph [0073] as teaching this limitation. However, this paragraph does not describe caching advertisements on the rendezvous node (or root node), as recited in Appellants' claims. Instead, it describes search hit information stored on the search engine (server).

For at least the reasons above, the rejection of claim 78 is not supported by the cited art and removal thereof is respectfully requested.

Claim 79:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are executable to: cache advertisements related to a particular area of interest; receive a discovery query from a peer node on the peer-to-peer network specifying advertisements related to the particular area of interest; if the rendezvous node includes resource advertisements satisfying the received discovery query, send the resource advertisements to the peer node; and forward the received discovery query to other rendezvous nodes on the peer-to-peer network caching advertisements related to the particular area of interest.* The Examiner submits that Dutta teaches these limitations in paragraphs [0039], [0050], [0057], and [0058] regarding Dutta's search filtering technique. As previously discussed, paragraphs [0057] and [0058] describe culling a list of nodes to which a query is sent, not determining if a cached resource advertisement satisfies a received discovery query specifying advertisements related to a particular area of interest. In addition, paragraph [0050] describes a server (not a root node) searching its own previously generated index list for content and paragraph [0039] describes a file list (which is also not a resource advertisement).

For at least the reasons above, the rejection of claim 79 is not supported by the cited art and removal thereof is respectfully requested.

Claim 80:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 48, wherein the program instructions are further executable to maintain one or more indexes of the resource advertisements cached by the rendezvous node.* The Examiner cites Figure 5C, element 554 as teaching

this limitation. However, this index result list is clearly not cached on a root node, which the Examiner equates with Appellants' rendezvous node. Instead it is clearly located on the search engine (server). Furthermore, this index is not an index of resource advertisements cached by a rendezvous node, but is an index of search results obtained by searching the index database (element 562), which is also not located on a root node.

For at least the reasons above, the rejection of claim 80 is not supported by the cited art and removal thereof is respectfully requested

Claim 81:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 80, wherein the program instructions are further executable to update the one or more indexes to reflect changes in the network resources*. The Examiner submits that Dutta teaches this limitation in paragraphs [0068] and [0069] "redirecting." However, this citation has nothing to do with a rendezvous node comprising instructions for updating an index to reflect a change in resources. Instead, it describes that when an index search is performed, the user's browser may receive an HTTP "Redirect" message that redirects the browser to the Web page indicated as URLs in a search result.

For at least the reasons above, the rejection of claim 81 is not supported by the cited art and removal thereof is respectfully requested

Claim 82:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the rendezvous node as recited in claim 80, wherein the program instructions are further executable to send the one or more indexes to a service in response to a request from the service, wherein the service is operable to use the indexes to discover network resources advertised in the index*. The Examiner again cites Figure 5C, element 554 as

teaching this limitation. However, as noted above, this index result list is clearly not an index of resource advertisements cached by a rendezvous node. Furthermore, there is nothing in FIG 5C or its description, or elsewhere in Dutta, that teaches or suggests program instructions executable to send this index to a service in response to a request from the service, or a service operable to use the index to discover network resources advertised in the index.

For at least the reasons above, the rejection of claim 82 is not supported by the cited art and removal thereof is respectfully requested

Claims 83-85:

In remarks regarding claims 45-47, 83-85, 106-108, 144-146, 158, and 159, the Examiner submits that Dutta '075 and Borella teach each rendezvous node is operable to cache one or more resources advertisements for discovery by the peer nodes on the peer-to-peer network and one or more peer-to-peer platform protocols include a discovery protocol. The Examiner admits that Dutta '075 and Borella fail to teach the rendezvous node is operable to receive a lease request or cancel, send a lease grant or cancel, and broadcast the message to one or more other peer nodes having temporary communications channels with the rendezvous node. The Examiner submits that these limitations are taught by Dutta '204 in FIG. 6 and paragraphs [0071], [0073], and [0074], which disclose "a peer to peer data sharing application between the peer-to-peer node which allow peer node to establish the temporary connection between peer node to perform download, searches, and uploading, etc." These citations describe a method for temporarily connecting to another node through a GUI-based interface, and disconnecting if does not appear that the desired information is likely to be found on the node. However, they do not describe the specific limitations of claims 83-85, which together recite a specific protocol for requesting, granting, establishing, and canceling such temporary connections through sending and receiving specific messages between the peer node and the rendezvous node.

The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Dutta '204 teaching into Dutta '075 and Borella's method for rendezvous node in order to allow the user to eliminate unnecessary data traffic and optimize the user's connections and search time. While this is a stated goal of Dutta '204, there is nothing in Dutta '075 or Borella to indicate that either of these issues exists. In fact, Dutta '075 includes another method of reducing unnecessary traffic, by culling the list of nodes to which a search query is sent. Therefore, another such method would not be necessary. Furthermore, even if the GUI interface of Dutta '204 were added to the method taught by Dutta '075 and Borella, this combination would still not teach or suggest all the limitations of claims 83-85, such as the specific messages used in the connection protocol of Appellants' claimed invention.

Therefore, for at least the reasons above, the rejection of claims 83-85 is not supported in the cited art and removal thereof is respectfully requested.

Claims 147, 148, 149, 151, and 152:

Regarding independent claim 147, Dutta in view of Borella does not teach or suggest a method, comprising: a rendezvous node communicating with one or more peer nodes on a peer-to-peer network, and a rendezvous node caching one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource; and one or more peer nodes discovering said resource advertisements. Appellants' discussion above regarding claim 48 applies also to independent claim 147, which recites a method for implementing the operations of a rendezvous node, similar to the rendezvous node recited in claim 48. Furthermore, the Examiner rejected independent claim 147 under the same rationale as claim 1. However, the rejection of claim 1 has been withdrawn and the scope of claim 147 differs from that of claim 1. Since the Examiner has withdrawn the rejection of claim 1 and has failed to address the differences between claim 1 and claim 147, the Examiner has failed to state a prima facie rejection of claim 147.

For at least the reasons above, the rejection of claim 147 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 150:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 147, further comprising: generating a resource advertisement for the rendezvous node; and the rendezvous node communicating said resource advertisement to peer nodes and other rendezvous nodes for discovery on the peer-to-peer network.* In the Final Action, in remarks regarding claims 61 and 62, the Examiner cited FIG. 4 of Dutta as teaching these limitations. Appellants note that the Examiner does not include any remarks regarding which, if any, elements of FIG. 4 teach the above limitations or how, nor does he cite any description of FIG. 4 that teaches them. Furthermore, as discussed above regarding claims 61 and 62, FIG. 4, which depicts a search engine, has nothing to do with resource advertisements for rendezvous nodes, much less with generating such an advertisement for each rendezvous node, or communicating them to peer nodes or other rendezvous nodes as recited in claim 150.

For at least the reasons above, the rejection of claim 150 is not supported by the cited art and removal thereof is respectfully requested.

Claim 153:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 147, further comprising: the rendezvous node receiving one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol; the rendezvous node determining if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and the rendezvous node, providing the resource advertisement to a peer node that broadcast the particular discovery query if the resource advertisement satisfying the particular*

discovery query is cached on the particular rendezvous node. Claim 153 includes limitations similar to those in claim 68 and was rejected along with claim 68. Therefore, the arguments presented above regarding claim 68 apply also to claim 153.

For at least the reasons above, the rejection of claim 153 is not supported by the cited art and removal thereof is respectfully requested.

Claim 154:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 153, further comprising forwarding each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node.* Claim 154 includes limitations similar to those in claim 69 and was rejected along with claim 69. Therefore, the arguments presented above regarding claim 69 apply also to claim 154.

For at least the reasons above, the rejection of claim 154 is not supported by the cited art and removal thereof is respectfully requested.

Claim 155:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 154, further comprising: the rendezvous node receiving a response message to a discovery query, wherein the discovery query specifies a desired type of advertisement, wherein the response comprises one or more advertisements of the desired type, wherein the response message is formatted in accordance with a peer-to-peer platform discovery protocol; and the rendezvous node forwarding the response message to a peer node on the peer-to-peer network that sent the discovery query.* Claim 155 includes limitations similar to those in claims 73-74 and was

rejected along with claims 73-74. Therefore, the arguments presented above regarding claims 73-74 apply also to claim 155.

For at least the reasons above, the rejection of claim 155 is not supported by the cited art and removal thereof is respectfully requested.

Claim 156:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 155, further comprising the rendezvous node caching the advertisements received in the response message for discovery by the plurality of peer nodes*. Claim 156 includes limitations similar to those in claim 78 and was rejected along with claim 78. Therefore, the arguments presented above regarding claim 78 apply also to claim 156.

For at least the reasons above, the rejection of claim 156 is not supported by the cited art and removal thereof is respectfully requested.

Claims 157-159:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the method as recited in claim 147, further comprising: the rendezvous node receiving a lease request message from a peer node of the one or more peer nodes requesting a temporary communications channel between the peer node and the rendezvous node; and the rendezvous node sending a lease grant message to the peer node in response to the lease request message, wherein the lease grant message includes information on the temporary communications channel*, as recited in claim 157. Claim 157 was rejected along with claim 82. However, claim 157 recites completely different limitations than claim 82, which were not addressed by the Examiner. Therefore the rejection of claim 157 was improper.

Furthermore claims 157-159 include limitations similar to the limitations in claims 83-85, and claims 158-159 were rejected along with claims 83-85. Therefore, the arguments presented above regarding claims 83-85 apply also to claims 157-159.

For at least the reasons above, the rejection of claims 157-159 is not supported by the cited art and removal thereof is respectfully requested.

Claims 194, 195, 196, 198, and 199:

Regarding independent claim 194, contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *a tangible, computer-accessible storage medium comprising program instructions, wherein the program instructions are computer-executable to implement: a rendezvous node communicating with one or more peer nodes on a peer-to-peer network, and a rendezvous node caching one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource; and one or more peer nodes discovering said resource advertisements.*

Appellants' discussion above regarding claim 48 applies also to independent claim 194, which recites a tangible, computer-accessible medium comprising program instructions executable to implement the operations of a rendezvous node, similar to the rendezvous node recited in claim 48. Furthermore, the Examiner originally rejected independent claim 194 under the same rationale as claim 1. However, the rejection of claim 1 has been withdrawn and the scope of claim 194 differs from that of claim 1. Since the Examiner has withdrawn the rejection of claim 1 and has failed to address the differences between claim 1 and claim 194, **the Examiner has failed to state a *prima facie* rejection of claim 194.**

For at least the reasons above, the rejection of claim 194 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 197:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement: generating a resource advertisement for the rendezvous node; and the rendezvous node communicating said resource advertisement to peer nodes and other rendezvous nodes for discovery on the peer-to-peer network.* Claim 197 recites limitations similar to those in claim 150 and was rejected along with claim 150. Therefore, the arguments presented above regarding claim 150 apply also to claim 197.

For at least the reasons above, the rejection of claim 197 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 200:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement: the rendezvous node receiving one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol; the rendezvous node determining if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and the rendezvous node, providing the resource advertisement to a peer node that broadcast the particular discovery query if the resource advertisement satisfying the particular discovery query is cached on the particular rendezvous node.* Claim 200 includes limitations similar to claim 68 and was rejected along with claim 68. Therefore, the arguments presented above regarding claim 68 apply also to claim 200.

For at least the reasons above, the rejection of claim 200 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 201:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the tangible, computer-accessible medium as recited in claim 200, wherein the program instructions are further executable to implement forwarding each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node*. Claim 201 includes limitations similar to claim 69 and was rejected along with claim 69. Therefore, the arguments presented above regarding claim 69 apply also to claim 201.

For at least the reasons above, the rejection of claim 201 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 202:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the tangible, computer-accessible medium as recited in claim 201, wherein the program instructions are further executable to implement: the rendezvous node receiving a response message to a discovery query, wherein the discovery query specifies a desired type of advertisement, wherein the response comprises one or more advertisements of the desired type, wherein the response message is formatted in accordance with a peer-to-peer platform discovery protocol; and the rendezvous node forwarding the response message to a peer node on the peer-to-peer network that sent the discovery query*. Claim 202 includes limitations similar to those in claim 77 and was rejected along with claim 77. Therefore, the arguments presented above regarding claim 77 apply also to claim 202.

For at least the reasons above, the rejection of claim 202 is unsupported by the cited art and removal thereof is respectfully requested.

Claim 203:

Contrary to the Examiner's assertion, Dutta in view of Borella fails to teach or suggest *the tangible, computer-accessible medium as recited in claim 202, wherein the program instructions are further executable to implement the rendezvous node caching the advertisements received in the response message for discovery by the plurality of peer nodes*. Claim 203 includes limitations similar to those in claim 78 and was rejected along with claim 78. Therefore, the arguments presented above regarding claim 78 apply also to claim 203.

For at least the reasons above, the rejection of claim 203 is unsupported by the cited art and removal thereof is respectfully requested.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 48-85, 147-159 and 194-203 was erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of \$500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-07200/RCK. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. C. Kowert', with a long horizontal flourish extending to the right.

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VIII. CLAIMS APPENDIX

The claims on appeal are as follows.

48. A rendezvous node, comprising:

a processor

a port operable to couple the peer node to a network; and

a memory operable to store program instructions, wherein the program instructions are executable by the processor to:

communicate with one or more peer nodes on a peer-to-peer network; and

cache one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource, wherein said resource advertisements are discoverable by said one or more peer nodes.

49. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to communicate with one or more other rendezvous nodes on the peer-to-peer network.

50. The rendezvous node as recited in claim 48, wherein the rendezvous node is a peer node.

51. The rendezvous node as recited in claim 48, wherein each resource advertisement comprises an identifier for and communication address for the corresponding network resource.

52. The rendezvous node as recited in claim 48, wherein each of the one or more of said resource advertisements comprises a security credential for authenticating the corresponding network resource.

53. The rendezvous node as recited in claim 48, wherein the network resources include one or more peer groups, wherein the one or more peer groups each comprise one or more peer nodes sharing one or more network resources, one or more peer nodes, services, applications, content, pipes and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services and the applications in the peer-to-peer environment, wherein the pipe endpoints are network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.

54. The rendezvous node as recited in claim 48, wherein the network resources include one or more peer groups, wherein each peer group comprises one or more peer nodes, wherein the resource advertisements include a peer group advertisement for each of said one or more peer groups, wherein each peer group advertisement further comprises an identifier for the corresponding peer group and information on how to join the peer group.

55. The rendezvous node as recited in claim 48, wherein the network resources include one or more peer nodes, wherein the resource advertisements comprise a peer advertisement for each of said one or more peer nodes, wherein each peer advertisement comprises an identifier for the corresponding peer node.

56. The rendezvous node as recited in claim 48, wherein the network resources include one or more services each provided by one or more peer nodes, wherein the resource advertisements comprise a service advertisement for each of said plurality of services, wherein each service advertisement comprises an identifier for the corresponding service.

57. The rendezvous node as recited in claim 48, wherein the network resources include a plurality of applications each provided by one or more peer nodes, wherein the resource advertisements comprise an application advertisement for each of said applications, wherein each application advertisement comprises an identifier for the corresponding application.

58. The rendezvous node as recited in claim 48, wherein the network resources include one or more contents each provided by one or more peer nodes, wherein the resource advertisements comprise a content advertisement for each of said contents, wherein each content advertisement comprises an identifier for the corresponding content.

59. The rendezvous node as recited in claim 48, wherein the network resources include one or more pipes, wherein the one or more pipes are communications channels between peer nodes, services and applications, wherein the resource advertisements comprise a pipe advertisement for each of said one or more pipes, wherein each pipe advertisement comprises an identifier for the corresponding pipe.

60. The rendezvous node as recited in claim 48, wherein the network resources include one or more pipe endpoints, wherein the pipe endpoints are network interfaces on peer nodes that are configured to be bound to pipes to establish the communications channels, wherein the resource advertisements comprise an endpoint advertisement for each of said one or more pipe endpoints, wherein each endpoint advertisement comprises an identifier for the corresponding pipe endpoint.

61. The rendezvous node as recited in claim 48, wherein the network resources include one or more other rendezvous nodes on the peer-to-peer network, wherein the resource advertisements comprise an advertisement for each of said rendezvous nodes, wherein each advertisement comprises an identifier for the corresponding rendezvous node.

62. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to:

generate an advertisement for the rendezvous node; and

communicate said advertisement to peer nodes and other rendezvous nodes on the peer-to-peer network.

63. The rendezvous node as recited in claim 48, wherein the one or more resource advertisements each comprise a time-to-live indicator, wherein the program instructions are further executable to:

decrement the time-to-live indicator comprised by each of the one or more resource advertisement cached by the rendezvous node; and

if the time-to-live indicator expires, delete or invalidate the particular cached resource advertisement.

64. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to join a peer group, wherein the peer group comprises a plurality of peer nodes sharing network resources, wherein, upon joining the peer group, the rendezvous node is accessible by the one or more peer nodes within the peer group to discover network resources within the peer group.

65. The rendezvous node as recited in claim 64, wherein, upon joining the peer group, the rendezvous node is not accessible by peer nodes not in the peer group.

66. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to discovery routes to network resources and communicate said routes to one or more peer nodes on the peer-to-peer network.

67. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to communicate with each of one or more peer nodes on the peer-to-peer network at startup of the particular peer node to aid the particular peer node in discovering network resources that the particular peer node requires.

68. The rendezvous node as recited in claim 48, wherein the program instructions are further operable to:

receive one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol;

determine if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and

if the resource advertisement satisfying the particular discovery query is cached on the particular rendezvous node, provide the resource advertisement to a peer node that broadcast the particular discovery query.

69. The rendezvous node as recited in claim 68, wherein the program instructions are further executable to forward each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node.

70. The rendezvous node as recited in claim 68, wherein each of the one or more discovery queries comprises a time-to-live indicator, wherein the program instructions are further executable to:

decrement the time-to-live indicators; and

if the time-to-live indicator expires, delete or invalidate the particular discovery query.

71. The rendezvous node as recited in claim 68, wherein the discovery queries each comprise a security credential, wherein the program instructions are further executable to use the security credential to authenticate a peer node sending the particular discovery query.

72. The rendezvous node as recited in claim 68, wherein one or more of the discovery queries specify resource advertisements for network resources within a particular region of the network.

73. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to:

receive a discovery query message from a peer node on the peer-to-peer network specifying a desired type of advertisement, wherein the discovery query message is formatted in accordance with a peer-to-peer platform discovery protocol;

locate one or more advertisements of the desired type of advertisements that are cached on the rendezvous node; and

send a response message comprising the one or more advertisements to the peer node in response to said discovery query message, wherein the response message is formatted in accordance with the peer-to-peer platform discovery protocol.

74. The rendezvous node as recited in claim 48, wherein the program instructions are further operable to:

receive a discovery query message from a peer node on the peer-to-peer network specifying a desired type of advertisement, wherein the discovery query message is formatted in accordance with a peer-to-peer platform discovery protocol; and

forward the discovery query message to one or more other rendezvous nodes.

75. The rendezvous node as recited in claim 48, wherein the program instructions are executable to:

receive a forwarded discovery query specifying a desired type of advertisement, wherein the discovery query is formatted in accordance with a peer-to-peer platform discovery protocol;

locate one or more advertisements of the desired type of advertisement that are cached on the rendezvous node; and

send a response message comprising the one or more advertisements to a peer node in response to the forwarded discovery query, wherein the response message is formatted in accordance with the peer-to-peer platform discovery protocol.

76. The rendezvous node as recited in claim 75, wherein the program instructions are further executable to forward the discovery query to one or more other rendezvous nodes on the peer-to-peer network.

77. The rendezvous node as recited in claim 48, wherein the program instructions are further operable to:

receive a response message to a discovery query, wherein the discovery query specifies a desired type of advertisement, wherein the response comprises one or more advertisements of the desired type, wherein the response message is formatted in accordance with a peer-to-peer platform discovery protocol; and

forward the response message to a peer node on the peer-to-peer network that sent the discovery query.

78. The rendezvous node as recited in claim 77, wherein the program instructions are further executable to cache for discovery by the plurality of peer nodes the advertisements received in the response message.

79. The rendezvous node as recited in claim 48, wherein the program instructions are executable to:

cache advertisements related to a particular area of interest;

receive a discovery query from a peer node on the peer-to-peer network specifying advertisements related to the particular area of interest;

if the rendezvous node includes resource advertisements satisfying the received discovery query, send the resource advertisements to the peer node; and

forward the received discovery query to other rendezvous nodes on the peer-to-peer network caching advertisements related to the particular area of interest.

80. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to maintain one or more indexes of the resource advertisements cached by the rendezvous node.

81. The rendezvous node as recited in claim 80, wherein the program instructions are further executable to update the one or more indexes to reflect changes in the network resources.

82. The rendezvous node as recited in claim 80, wherein the program instructions are further executable to send the one or more indexes to a service in response to a request from the service, wherein the service is operable to use the indexes to discover network resources advertised in the index.

83. The rendezvous node as recited in claim 48, wherein the program instructions are further executable to:

receive a lease request message from a peer node of the one or more peer nodes requesting a temporary communications channel between the peer node and the rendezvous node; and

send a lease grant message to the peer node in response to the lease request message, wherein the lease grant message includes information on the temporary communications channel.

84. The rendezvous node as recited in claim 83, wherein the program instructions are further executable to:

receive a lease cancel request message from the peer node requesting the cancellation of the temporary communication channel; and

send a lease cancelled message to the peer node in response to the lease cancel request message, wherein the lease cancelled message confirms the cancellation of the temporary communication channel.

85. The rendezvous node as recited in claim 83, wherein the program instructions are further executable to:

receive a message from the peer node via the temporary communication channel;
and

broadcast the message to one or more other peer nodes of the one or more peer nodes having temporary communications channels with the rendezvous node.

147. A method, comprising:

a rendezvous node communicating with one or more peer nodes on a peer-to-peer network, and

a rendezvous node caching one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource; and

one or more peer nodes discovering said resource advertisements.

148. The method as recited in claim 147, further comprising a rendezvous node communicating with one or more other rendezvous nodes on the peer-to-peer network.

149. The method as recited in claim 147, wherein the network resources include one or more peer groups, wherein the one or more peer groups each comprise one or more peer nodes sharing one or more network resources, one or more peer nodes, services, applications, content, pipes and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services and the applications in the peer-to-peer environment, wherein the pipe endpoints are network

interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.

150. The method as recited in claim 147, further comprising:

generating a resource advertisement for the rendezvous node; and

the rendezvous node communicating said resource advertisement to peer nodes and other rendezvous nodes for discovery on the peer-to-peer network.

151. The method as recited in claim 147, further comprising the rendezvous node joining a peer group, wherein the peer group comprises a plurality of peer nodes sharing network resources, wherein, upon joining the peer group, the rendezvous node is accessible by the one or more peer nodes within the peer group to discover network resources within the peer group.

152. The method as recited in claim 151, wherein, upon joining the peer group, the rendezvous node is not accessible by peer nodes not in the peer group.

153. The method as recited in claim 147, further comprising:

the rendezvous node receiving one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol;

the rendezvous node determining if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and

the rendezvous node, providing the resource advertisement to a peer node that broadcast the particular discovery query if the resource advertisement

satisfying the particular discovery query is cached on the particular rendezvous node.

154. The method as recited in claim 153, further comprising forwarding each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node.

155. The method as recited in claim 154, further comprising:

the rendezvous node receiving a response message to a discovery query, wherein the discovery query specifies a desired type of advertisement, wherein the response comprises one or more advertisements of the desired type, wherein the response message is formatted in accordance with a peer-to-peer platform discovery protocol; and

the rendezvous node forwarding the response message to a peer node on the peer-to-peer network that sent the discovery query.

156. The method as recited in claim 155, further comprising the rendezvous node caching the advertisements received in the response message for discovery by the plurality of peer nodes.

157. The method as recited in claim 147, further comprising:

the rendezvous node receiving a lease request message from a peer node of the one or more peer nodes requesting a temporary communications channel between the peer node and the rendezvous node; and

the rendezvous node sending a lease grant message to the peer node in response to the lease request message, wherein the lease grant message includes information on the temporary communications channel.

158. The method as recited in claim 157, further comprising:

the rendezvous node receiving a lease cancel request message from the peer node requesting the cancellation of the temporary communication channel; and

the rendezvous node sending a lease cancelled message to the peer node in response to the lease cancel request message, wherein the lease cancelled message confirms the cancellation of the temporary communication channel.

159. The method as recited in claim 157, further comprising:

the rendezvous node receiving a message from the peer node via the temporary communication channel; and

the rendezvous node broadcasting the message to one or more other peer nodes of the one or more peer nodes having temporary communications channels with the rendezvous node.

194. A tangible, computer-accessible storage medium comprising program instructions, wherein the program instructions are computer-executable to implement:

a rendezvous node communicating with one or more peer nodes on a peer-to-peer network, and

a rendezvous node caching one or more resource advertisements for network resources, wherein each of said resource advertisements comprises an indication of how to access the corresponding network resource; and

one or more peer nodes discovering said resource advertisements.

195. The tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement a rendezvous node communicating with one or more other rendezvous nodes on the peer-to-peer network.

196. The tangible, computer-accessible medium as recited in claim 194 wherein the network resources include one or more peer groups, wherein the one or more peer groups each comprise one or more peer nodes sharing one or more network resources, one or more peer nodes, services, applications, content, pipes and pipe endpoints, wherein the pipes are communications channels between one or more of the peer nodes, the services and the applications in the peer-to-peer environment, wherein the pipe endpoints are network interfaces on the peer nodes that are configured to be bound to the pipes to establish the communications channels.

197. The tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement:

generating a resource advertisement for the rendezvous node; and

the rendezvous node communicating said resource advertisement to peer nodes and other rendezvous nodes for discovery on the peer-to-peer network.

198. The tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement the rendezvous node joining a peer group, wherein the peer group comprises a plurality of peer nodes sharing network resources, wherein, upon joining the peer group, the rendezvous node is

accessible by the one or more peer nodes within the peer group to discover network resources within the peer group.

199. The Previously presented tangible, computer-accessible medium as recited in claim 198, wherein, upon joining the peer group, the rendezvous node is not accessible by peer nodes not in the peer group.

200. The tangible, computer-accessible medium as recited in claim 194, wherein the program instructions are further executable to implement:

the rendezvous node receiving one or more discovery queries for discovering said network resources, wherein the discovery queries are formatted in accordance with a discovery protocol;

the rendezvous node determining if a resource advertisement satisfying a particular one of the one or more discovery queries is cached on the particular rendezvous node; and

the rendezvous node, providing the resource advertisement to a peer node that broadcast the particular discovery query if the resource advertisement satisfying the particular discovery query is cached on the particular rendezvous node.

201. The tangible, computer-accessible medium as recited in claim 200, wherein the program instructions are further executable to implement forwarding each of the one or more discovery queries to one or more other rendezvous nodes on the peer-to-peer network if the resource advertisement satisfying the particular discovery query is not cached on the rendezvous node.

202. The tangible, computer-accessible medium as recited in claim 201, wherein the program instructions are further executable to implement:

the rendezvous node receiving a response message to a discovery query, wherein the discovery query specifies a desired type of advertisement, wherein the response comprises one or more advertisements of the desired type, wherein the response message is formatted in accordance with a peer-to-peer platform discovery protocol; and

the rendezvous node forwarding the response message to a peer node on the peer-to-peer network that sent the discovery query.

203. The tangible, computer-accessible medium as recited in claim 202, wherein the program instructions are further executable to implement the rendezvous node caching the advertisements received in the response message for discovery by the plurality of peer nodes.

IX. EVIDENCE APPENDIX

No evidence submitted under 37 CFR §§ 1.130, 1.131 or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.